

REMARKS

The Examiner rejected claims 1-2, 4-7, and 10 under 35 U.S.C. Section 102(e) as being anticipated by Srinivasan, et al., U.S. Patent No. 6,357,042.

The Examiner suggests that Srinivasan et al. disclose an apparatus and method for synchronizing separately-authored metadata with video/audio stream for display using a presentation time stamp (PTS) tag. In the embodiment of FIG. 16, the metadata is web-based content, such as authored videos, interactive videos, and annotation streams, and the video capture and synchronization device is a set-top-box. The metadata video content includes a structure for receiving a time stamp value associated with the video element. The metadata is tagged with an appropriate frame number or numbers (PTS) which will indicate a frame or series of frames where resulting annotation will appear during playback of the video. The metadata and associated video content is encoded and set out as private data in the MPEG multiplexed stream.

In other words, Srinivasan et al. disclose a system by which documents may be delivered to the decoder together with a PTS time stamp. Srinivasan et al. specifically teaches that such metadata video content is delivered using the private data in the MPEG-2 multiplexed data stream. While apparently functional, the use of the private data provision of the MPEG-2 multiplexed data stream results in difficulty precisely knowing the appropriate value of the PTS time stamp value beforehand. For example, the author of the metadata video content will not likely have an accurate value for what the PTS tag is when the content is authored, which may be on a different day than the other content.

Claim 1 patentably distinguishes over Srinivasan et al. by claiming that the document includes a structure for receiving

a time stamp value associated with the video element in a packetized elementary stream.

Srinivasan et al. fails to teach any technique of using the packetized elementary stream (see e.g., present application FIG. 2, number 54) for a document. In contrast, Srinivasan et al. uses the private data in the MPEG-2 multiplexer, which is distinctly different than the packetized elementary stream.

By way of example, and not by any way meant to interpret or otherwise limit the claims, the packetized elementary stream potentially facilitates more accurate presentation of the document. For example, the document may be transmitted in the packetized elementary stream with a PTS time stamp, for which the value of the PTS time stamp is not important. In Srinivasan et al. the value of the PTS time stamp in the multiplexer is important for presentation because of the use of the private data in the MPEG-2 multiplexer. This is an improvement because the author may have no information of what the value should be when the document was authorized. In the receiver, the PTS may be extracted from the PTS header and provided to the document where the PTS tag placeholder is. Now the system has a valid PTS value in the document that the receiver can use to synchronize the document with the audio and video.

While these limitations are not included in claim 1, the use of the packetized elementary stream for the document facilitates such a system which is not taught nor suggested in any way by Srinivasan et al.

Claims 2-5 depend from claim 1 and are patentable for the same reasons asserted for claim 1.

Claim 6 patentably distinguishes over Srinivasan et al. by claiming encoding in a packetized elementary stream a first data packet comprising the document and the time stamp value, and

encoding in a packetized elementary stream a second data packet comprising the time stamp value and a target datum in at least one of the video element and the audio element.

Srinivasan et al. fails to teach any technique of using the packetized elementary stream (see e.g., present application FIG. 2, number 54) for a document. In contrast, Srinivasan et al. uses the private data in the MPEG-2 multiplexer, which is distinctly different than the packetized elementary stream.

Claims 7-10 depend from claim 6 and are patentable for the same reasons asserted for claim 1.

Claim 11 patentably distinguishes over Srinivasan et al. by claiming the packet assembler encoding in a packetized elementary stream a first data packet comprising a data unit representing the document and a time stamp value specifying a time for displaying the document and a second data packet comprising the target datum and the time stamp value.

Srinivasan et al. fails to teach any technique of using the packetized elementary stream (see e.g., present application FIG. 2, number 54) for a document. In contrast, Srinivasan et al. uses the private data in the MPEG-2 multiplexer, which is distinctly different than the packetized elementary stream.

Claims 12-14 depend from claim 11 and are patentable for the same reasons asserted for claim 1.

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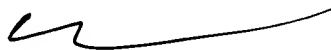
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The Examiner is respectfully requested to reconsider claims 1-14 and to pass the application to issue.

Respectfully submitted,



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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231, on January 9, 2003.



Dated: January 9, 2003

Kevin L. Russell

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Application No. 09/287,402

Amended: January 9, 2003

VERSION WITH MARKINGS TO SHOW CHANGES MADE

The manner in which the claims have been amended is shown below, with deletions bracketed and added material underlined.

1(amended). A method of displaying a document together with a time stamp specified display of a video element comprising the steps of:

- (a) providing said document including a structure for receiving a time stamp value associated with said video element in a packetized elementary stream;
- (b) inserting said time stamp value said associated with said video element in said structure;
- (c) reading said time stamp value in said document;
and
- (d) at least one of providing and signaling the availability of said document to a viewer in accordance with said time stamp value.

6(amended). A method of displaying a document together with at least one of a video element and an audio element of a video comprising:

- (a) providing said document including a structure for receiving a time stamp value specifying a display time for said document;
- (b) encoding in a packetized elementary stream a first data packet comprising said document and said time stamp value;
- (c) encoding in a packetized elementary stream a second data packet comprising said time stamp

- value and a target datum in said at least one of said video element and said audio element;
- (d) reconstructing said document from said first data packet;
 - (e) capturing said time stamp value from said first data packet;
 - (f) inserting said time stamp value into said structure for receiving said time stamp value;
 - (g) reading said time stamp value in said document; and
 - (h) at least one of providing¹ and signaling the availability of said document to a viewer and displaying said target datum of said at least one of said video element and said audio element at said display time specified by said time stamp value.

11(amended). An apparatus for displaying a document together with at least one of a video and an audio element of a video comprising:

- (a) a document server for delivering said document including a structure for receiving a time stamp value as a first data stream to a packet assembler said delivery being coordinated with the arrival of a target datum in a second data stream representing said at least one of a video element and an audio element;
- (b) said packet assembler for encoding in a packetized elementary stream a first data packet comprising a data unit representing said document and a time stamp value specifying a time for displaying said document and a second data packet comprising said

target datum and said time stamp value;

- (c) a packet disassembler for separating said data unit and said time stamp value from said first data packet;
- (d) a parser to reconstruct said document from said data unit;
- (e) a time stamp loader to insert said time stamp value into said structure for receiving said time stamp value; and
- (f) a data presentation engine to read said document and signal a viewer of the availability of said document at said time specified by said time stamp value.